

Live. Mobile. Remote.

MVE™ SYSTEM

The MVE™ combines HauteSpot Network's HauteSHOT™ microNVR compact video processing hardware platform with Sentinel AVE LLC's software to stream live, high quality video in real time from anywhere, any time.

REACH BEYOND THE EDGE

Live, real-time, in vehicle, nomadic and remote surveillance is becoming more essential. Public safety, security, fleet management, and first responder resources are stretched thin and have to increasingly rely on public communication networks such as 3G and 4G cellular to maintain communications between field staff and supervisors or incident commanders.

Unfortunately public networks provide many challenges to live video streaming. They are not always reliable, they do not always deliver the bandwidth you desire or require, and they can become very congested, particularly in emergencies when they are most needed.

For storing, forwarding, and video integrity, HauteSpot offers the MOBILE VIDEO VAULT™ solution.

MVE™

Until now, if you wanted to use video over public networks you had to compromise video quality, resolution, frame rate, camera density or all of the above. Now, with the MVE™ system, you can stream live, real time video at high resolution, high frame rate, and high quality from dozens to thousands of cameras reliably over any public network.

SOLVING THE TOUGH PROBLEMS

By combining the compact size, power efficiency and computing performance of the HauteSHOT™ microNVR with the leading edge video processing and the Sentinel's AVE LLC's Video transport protocols, which were developed for the US Military, we have created the MVE™ platform.

MVE™ is a client server architecture, which is completely network aware. It keeps track of the underlying network performance and manages the video streams running over the links for optimal quality. MVE™ creates a persistent and secure connection

from the server located in the vehicle, on a pole, on a fence, or in a pocket, to the remote viewing client (the supervisor, incident commander, or video storage server). This connection keeps itself connected no matter what the public wireless network throws at it:

- If the remote server roams from one cell tower to another, MVE™ will keep the connection streaming.
- If the cellular link disconnects, MVE™ will try to reconnect and keep the connection streaming.
- If the IP address of the cellular link changes, MVE™ will keep the connection streaming.
- If the connection slows down, MVE™ will adjust the stream rate for optimal performance over whatever bandwidth is available.

MVE™ works with any wireless or wired technology. 3G GPRS, EVDO, EDGE, HSPA; 4G LTE, WiMAX, HSPA+; Satellite; Public Safety Broadband; Cable Modem; xDSL; T-1; ISDN; WiFi; and of course HauteSpot Networks' TDMA wireless protocol which is designed for IP video streaming.

FAILURE PROOF

Even if you completely lose connectivity, MVE™ will record all of your video locally to the HauteSHOT™ microNVRs integrated high capacity storage at high resolution. If you need to go back to interrogate video later in time, you can retrieve the video over wireless or wired by just plugging in an Ethernet cable directly to the HauteSHOT™ microNVR recorder.

Video can also be transferred off the recorder using microSD disk or USB.

SCALABLE BY DESIGN

Every MVE™ server can be set to push to one or multiple destinations. Large scale systems can be built with back end media servers, which receive video from remote MVE™ servers and then re-broadcast the

video out to hundreds or even thousands of remote clients. In this way a single stream from a remote MVE™ server can reach a huge audience if required, all in the same high resolution, high frame rate as the original stream, with low latency.

LOCATION AWARE

Every MVE™ server supports per camera GPS. In the future, this will be expanded to add azimuth, tilt and acceleration as well. The remote server reports back the location of the camera which can then be displayed on the client workstation and followed in real time. Where azimuth is available, the field of view is also displayed. Supervisors and incident commanders can know in real time exactly where the camera is and what it is looking at.

FULLY BIDIRECTIONAL

MVE™ is designed to let supervisors and incident commanders controls remote cameras and other devices. Once a link is established, PTZ commands, and other similar functions can be used to control the cameras over the same wireless links with low latency response.

LOCAL CAMERA

CONNECTIVITY OPTIONS

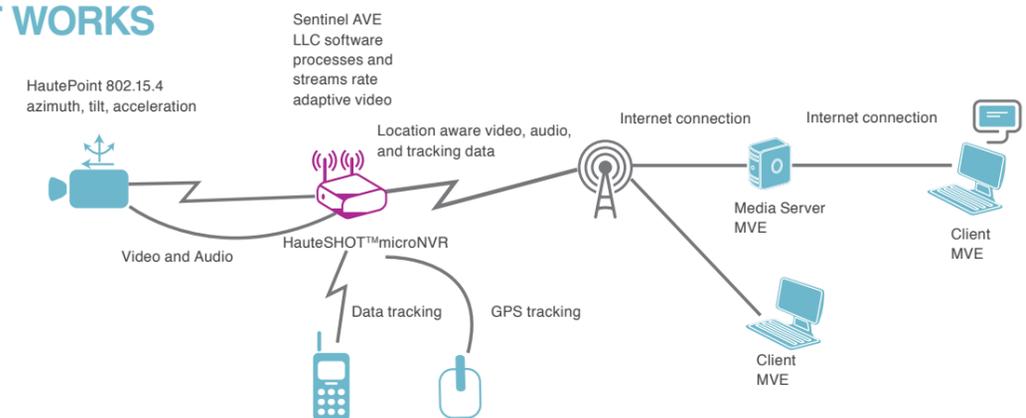
The HauteSHOT™ microNVR hardware on which the MVE™ platform is based includes both 10/100/1000 Ethernet, USB, and 802.11 b/g/n 1x1 MIMO wireless connectivity options for connecting cameras. This means that you can use IP cameras that are connected to the system directly via one of the two Ethernet ports. Or you can connect USB cameras to one of the 4 USB 2.0 ports. Or you can connect IP cameras using Wi-fi. Regardless of how you connect, MVE™ will capture the video, record it locally, and streaming it remotely.

REMOTE CONNECTIVITY OPTIONS

The MVE™ can connect remotely using USB cellular modems. Any modem supporting Windows XP Pro SP3 drivers can be used. Alternatively you can connect using Ethernet or high speed serial over the DB9 connection.

LIVE. MOBILE. REMOTE.

HOW IT WORKS



BENEFITS

- Stream live, real-time video at high resolution, high frame rate and high quality from dozens to thousands of cameras
- Reliable over 3G and 4G public Network
- Reliable over Cable modem, Satellite or any public Network
- Unlimited segment clips from the same video as you need
- Managed multi-tiered storage provides cost effective long-term retention
- Add the MOBILE VIDEO VAULT™ solution for complete video storing, forwarding, and video integrity



HauteSHOT™ microNVR



Please scan the QR code from your phone and watch how it works.

Contact HauteSpot Networks

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Solution Partner



VIDEO FUSION DISPLAY AND IMAGING SCIENCES

Sentinel AVE, LLC is a highly-specialized developer of software applications for video processing, network communications, and display. Our work is grounded in advanced computer graphics and communications, and includes applications for 3D modeling and 3D video displays, geospatial data display, and image recognition. Our mobile and wireless solutions draw on a decade of research in complex problems of capturing, processing, streaming, and displaying real-time video in-context, including many-cameras to many-users independently and simultaneously. We've addressed these problems in our applications, to enable the end-user, an IT or Security Department, distributor, integrator, or other surveillance product supplier to make full use of the latest in industry IP video hardware and software.

We've adapted our work to create easy-to-use, 2D and 3D video operation/display software for the surveillance industry. Our products are designed for wide application in small or large projects, using standard PCs and major camera brands and models.

Sentinel was formed in 2006 to commercialize prior work of the Company's lead scientists at the University of Southern California ("USC"), and we are partly owned by USC. We are based in El Segundo, CA. Our products have been evaluated and used by defense contractors, oil and gas, commercial and government research lab clients.

www.sentinelave.com

HAUTESPOT[®] Networks

End-to-End Mobile Video Solutions

MVE™ System

The MVE™ system combines HauteSpot Network's HauteSHOT™ microNVR compact video processing hardware platform with Sentinel AVE LLC's software to stream live, high quality video in real time from anywhere, any time.

MOBILE VIDEO VAULT™ System

The HauteSpot MOBILE VIDEO VAULT™ using SoleraTec's Phoenix RSM software manages all mobile in-vehicle demands by providing video capture, local live viewing, wireless video transfer, and video storage.

Complete Mobile Video Solutions